

CLAIMS

We claim:

- 1 1. A method of retrieving repetitively broadcast data files over at least a first time
2 interval and a second time interval comprising:
 - 3 receiving a file request from a user selecting at least one of the repetitively
4 broadcast data files;
 - 5 initiating an authorized file retrieval process to retrieve at least a first part of the
6 repetitively broadcast data file during the first time interval, and subsequently retrieving a
7 second part of the repetitively broadcast data file during the second time interval; and
 - 8 rearranging the first and second parts to reconstitute at least a part of the
9 repetitively broadcast data file.
- 1 2. The method of claim 1 further comprising requesting an authorization for
2 retrieval of the file requested.
- 1 3. The method of claim 1 further comprising:
 - 2 retrieving a third part of the data file broadcast during a third time interval; and
 - 3 rearranging the first, second and third parts to reconstitute the complete data file.
- 1 4. The method of claim 1 wherein different types of files are broadcast in each of
2 a plurality of sub-channels within a given channel, and wherein each file has a different
3 rate of broadcast.
- 1 5. The method of claim 1 wherein an EPG is received by a user STB and
2 presented to the user.

1 6. The method of claim 5 wherein the user STB automatically selects a download
2 time from an EPG corresponding to the file selected by the user, each file including data
3 corresponding to at least a download interval.

1 7. The method of claim 5 wherein the user STB automatically calculates the
2 download window length using an EPG.

1 8. The method of claim 7 wherein the download window length is longer than the
2 longest broadcast interval corresponding to the largest file.

1 9. A computer program product embodied in a computer readable medium for
2 retrieving repetitively broadcast data files over at least a first time interval and a second
3 time interval comprising:

4 code means for receiving a file request from a user selecting at least one of the
5 broadcast data files;

6 code means for initiating an authorized file retrieval process to retrieve at least a
7 first part of the data file broadcast during the first time interval, and subsequently
8 retrieving a second part of the data file broadcast during the second time interval; and

9 code means for rearranging the first and second parts to reconstitute at least a part
10 of the data file.

1 10. The computer program product of claim 9 further comprising requesting an
2 authorization for retrieval of the file requested.

1 11. The computer program product of claim 9 further comprising:

2 code means for retrieving a third part of the data file broadcast during a third time
3 interval; and

4 code means for rearranging the first, second and third parts to reconstitutes the
5 complete data file.

1 12. The computer program product of claim 9 wherein different types of file may
2 be broadcast in each sub-channel within a given channel, and wherein each file has a
3 different broadcast rate.

1 13. The computer program method of claim 9 wherein an EPG is received by a
2 user STB and presented to the user.

1 14. The computer program product of claim 13 wherein the user STB
2 automatically selects a download time from an EPG corresponding to the file selection by
3 the user, each file including data corresponding to at least a download interval.

1 15. The computer program product of claim 13 wherein the user STB
2 automatically calculates the download window length using an EPG.

1 16. The computer program product of claim 15 wherein the download window
2 length is longer than the longest broadcast interval corresponding to the largest file.

1 17. An apparatus for retrieving data files broadcast repetitively over at least a
2 first time interval and a second time interval comprising:

3 means for receiving a file request from a user selecting at least one of the
4 broadcast data files;

5 means for initiating an authorized file retrieval process to retrieve at least a first
6 part of the data file broadcast during the first time interval, and subsequently retrieving a
7 second part of the data file broadcast during the second time interval; and

8 means for rearranging the first and second parts to reconstitute at least a part of
9 the data file.

1 18. The apparatus of claim 17 further comprising requesting an authorization for
2 retrieval of the file requested.

1 19. The apparatus of claim 17 further comprising:

2 means for retrieving a third part of the data file broadcast during a third time
3 interval; and

4 means for rearranging the first, second and third parts to reconstitutes the
5 complete data file.

1 20. The apparatus of claim 17 wherein different types of file may be broadcast in
2 each sub-channel within a given channel, and wherein each file has a different broadcast
3 rate.

1 21. The apparatus of claim 17 wherein an EPG is received by a user STB and
2 presented to the user.

1 22. The apparatus of claim 21 wherein the user STB automatically selects a
2 download time from an EPG corresponding to the file selection by the user, each file
3 including data corresponding to at least a download interval.

1 23. The apparatus of claim 21 wherein the user STB automatically calculates the
2 download window length using an EPG.

1 24. The apparatus of claim 23 wherein the download window length is longer than
1 the longest broadcast interval corresponding to the largest file.

1 25. A method of downloading video files broadcast periodically, using an
2 intelligent STB comprising:
3 receiving a user input including at least one selected video file;
4 sending user selection information to a file server;
5 obtaining authorization from the file server to download the selected video file;
6 initiating an authorized download of at least a first part of the selected video file
7 broadcast during the first time interval, and subsequently retrieving a second part of the
8 video file broadcast during the second time interval; and

9 rearranging the first and second parts to reconstitute at least a part of the video
10 file.

1 26. The method of claim 25 further comprising:
2 retrieving additional parts of the video file broadcast during additional time
3 interval; and
4 rearranging all the parts to reconstitutes the complete video file.

1 27. A method of supplying video files for download by an intelligent STB
2 comprising:
3 broadcasting repetitively at least one video file over a predetermined bandwidth
4 wherein the rate of broadcast may be different from the encoding rate, and wherein each
5 of a plurality of sub-channels may operate at a different rate of broadcast.

1 28. The method of claim 27 further comprising:
2 receiving a request to download a video file being broadcast repetitively from an
3 intelligent STB; and
4 sending an authorization to download at least one broadcast video file.

1 29. The method of claim 27 wherein each video file is broadcast continuously.

1 30. The method of claim 27 wherein the within a given channel, video files with
2 different encoding rate are broadcast over different bandwidths.

1 31. The method of claim 27 wherein several video files are broadcast over the
2 same bandwidth.

1 32. A system for supplying video files for download by an intelligent STB
2 comprising:
3 means for broadcasting repetitively at least one video file over a predetermined
4 bandwidth;

5 means for receiving a request to download a video file being broadcast
6 repetitively from an intelligent STB;
7 means for sending an authorization to download at least one broadcast video file;
8 and
9 means for receiving the authorization to download and downloading the video
10 file.

1 33. A method for storing data files broadcast repetitively in a over a transmission
2 medium for future access, comprising:
3 requesting an authorization to use a selected data file;
4 receiving at least a portion of a plurality of said selected data files, said plurality
5 including a first transmission of said selected data file and a second transmission of said
6 selected data file, wherein said portion includes and end portion of said first transmission
7 of said selected data file and a beginning portion of said second transmission of said
8 selected data file;
9 receiving an authorization to use said selected data file;
10 initiating an authorized data file storage process to store said end portion and said
11 beginning portion such that said end portion and said beginning portion forms a complete
12 data file.

1 34. The method of claim 33 further comprising reconstructing said selected data
2 file from said stored end portion and said beginning portion.

1 35. The method of claim 33 further comprising constructing a data file
2 substantially similar to said selected data file from said stored end portion and said
3 beginning portion.

1 36. The method of claim 33 further comprising displaying a visual representation
2 of at least a portion of said complete data file.

1 37. The method of claim 33, wherein said selected data file is an audio/visual
2 display program.

1 38. The method of claim 33 wherein said selected data file is an interactive
2 machine executable program.

1 39. The method of claim 33 wherein said first and second transmissions of said
2 selected data file are encoded to prevent unauthorized access to said selected data file.

1 40. The method of claim 39 wherein a client set-top-box is used to decipher said
2 encoded selected data file using said authorization.

1 41. The method of claim 33 further comprising receiving an electronic
2 programming guide (EPG), wherein said requesting an authorization to use a selected
3 data file is facilitated by said EPG.